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ABSTRACT

A training experiment was made with 40 bilingual/bicultural preservice teachers that compared the effectiveness of two teaching strategies. The students were taught using a self-instructional (field-independent) approach o a cooperative (field-sensitive) approach. At the same time, both groups were learning to combine field-sensitive and field independent activities within their own lesson planning. Participants were undergraduate Spanish-English, Puerto Rican, bilingual teacher trainees. They were required to write lesson plans that incorporated behavioral objectives, Puerto Rican cultural elements, a variety of instructional strategies, and field-sensitive/field-independent elements in English and Spanish. During the training sessions, the self-instructional treatment group used a self-teaching package. The cooperative treatment group was presented with the same training material through the use of scripts and materials that encouraged teacher-student interaction. In comparing the cooperative group with the self-instructional group, it was noted that the cooperative group scored significantly higher on its ability to write behavioral objectives, to include Puerto Rican cultural elements in the English language, and to plan for a variety of instructional strategies. It is suggested that the learning styles of adult, Spanish-English bilingual teacher trainees tend to be field-sensitive. A recommendation is made that trainees with Hispanic backgrounds should be given specific training before starting a field-independent module, since this popluation seems to learn more effectively in a cooperative atmosphere. (JD)

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THE EFFECTIVENESS OF TWO STRATEGIES TO DEVELOP SELECTED SKILLS IN BILINGUAL/BICULTURAL TEACHERS

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INTRODUCTION

Often bilingual educators ask the following questions: What specific skills do bilingual/bicultural teachers need? How shall the training for bilingual/bicultural teachers be distinct from the basic training for monolingual teachers? and What teacher training strategies are most effective with bilingual/bicultural teachers?

The present research reports on an experiment with one population of bilingual/bicultural preservice teachers that compared the effectiveness of two teaching strategies. The two teaching strategies were based on learning characteristics of many Hispanic and non-Hispanic learners as identified in the Cultural Democracy Model developed by Ramirez and Castaneda in 1974. In addition, the study examined the adult bilingual preservice undergraduate student both as a learner and as a trainee who was learning to use specific procedures and strategies for instructional planning. At the same time that the students were taught using a self-instructional (field-independent) approach or cooperative (field-sensitive) approach, both groups were learning to combine field-sensitive and field-independent activities within their own plans. The research compared the two teaching strategies to develop selected skills identified by Blanco (1977, 1978) as essential for bilingual/bicultural teachers. Although the findings were limited to the specific population, the data yielded interesting implications for teacher training and staff development for both bilingual and monolingual teachers.

Objectives of the Research Report

1. To report on a bilingual/bicultural teacher-training experiment that compared the effectiveness of two teaching strategies to train bilingual preservice trainees to write lesson plans that incorporated behavioral objectives, Puerto Rican cultural elements, a variety of instructional strategies, and field-sensitive/field-independent elements in English and Spanish.
2. To discuss the implications of the findings in terms of the effectiveness of teaching/learning strategies that might be used with adult, Hispanic, bilingual/bicultural teacher trainees.
3. To suggest the need for staff development at the university and inservice levels for monolingual/bilingual teacher education faculty to foster greater awareness of teaching/learning styles across cultures.
4. To emphasize the need for the development of balanced bilingual teachers through training experiences in both Spanish and English.

THEORETICAL FRAMEWORK

Field-Sensitive and Field-Independent Theories

One of the original developers of the field-independent and field-dependent (sensitive) theories was Witkin (1967), who, with his research associates, conducted studies using the Rod and Frame Test and the Embedded Figures Test. Subjects who were identified as more analytical, based on the way they were able to distinguish a geometrical shape from within a complicated technical design were termed field-independent. Subjects who perceived the objects in a total organization of the field were classified as field-dependent. Even during the initial stages of the development of the theories, Witkin indicated that there might

be cross-cultural implications to the research.

Cohen (1969) made an application of the field-independent/field-dependent (field-sensitive) theories to schools in the U. S. Cohen used the terminology of "relational cognitive style," which required a "descriptive mode of abstraction," and "analytical" cognitive style which was an "analytical mode of abstraction" (p. 830) to describe the learning atmosphere in schools. Cohen indicated that schools placed more emphasis on the "analytical mode of abstraction" as the learner progressed to the higher grades. Therefore, learners who tend to learn by organizing their environment through a total context often experience continued difficulty in the school setting.

Ramirez and Castaneda (1974) indicated that through socialization practices, some cultures tend to develop more field-sensitive characteristics, whereas others tend to develop more field-independent cognitive styles. Although Witkin's theory indicated that all children across cultures are field-dependent at birth, he found that the children did better on the field-independent type tests as the Embedded Figures Test as they grew older. Ramirez and Castaneda (1974) indicated that this outcome does not demonstrate that children are becoming less field-sensitive, but, rather they may be becoming bicognitive in learning styles.

Witkin (1977) identified four major areas of possible contributions that field-dependent (sensitive) and field-independent cognitive styles research could provide to educators: 1) how students learn; 2) how teachers teach; 3) how teachers and students interact;

4) how students make their educational-vocational choices (p. 2). It is important to look at how the field-sensitive and field-independent characteristics are related to teaching strategies and adult learning. Such studies are important for teacher training because they provide needed information as to which methods, materials, and media might be most effective for teacher training as well as enable the trainees to transfer their skills to the bilingual classroom.

In analyzing the characteristics of adult learners, Ramirez and Castaneda (1974) have indicated that adults tend to be more bicognitive and hence, are able to adjust to a field-independent or field-sensitive type of learning environment. The research by Witkin et. al. (1977) found that field-sensitive students often enter the field of teaching. This finding is important in its potential implications for teacher training. If the trainees tend to be more field-sensitive, why do the teacher-training activities stress more field-independent teaching strategies? Therefore, bilingual/bicultural teachers, without special training, may tend to adopt the field-independent teaching strategies for their classrooms.

In an attempt to train bilingual/bicultural teachers to vary teaching styles to meet the needs of bilingual/bicultural youngsters, Ramrirez and Castaneda (1974) trained teachers to analyze children's learning styles according to researcher-developed observation instruments. The teachers were then trained to plan and implement lessons in the less familiar teaching style to help them to develop bicognitive learning environments and strategies within their individual classrooms.

As Joyce (1978) and Hunt (1971) have suggested, the teacher trainee must be trained to plan for specific learning activities and environments for our pluralistic society. As Laosa (1977) indicated, training teachers to develop a variety of teaching behaviors supports the concept of biculturalism in which the child/adult can adapt to the required behaviors for specific situations within each culture. Noting the importance for teachers to become aware of and to plan the most effective instructional strategies to be used with bilingual/bicultural children, Vazquez (1979) explained that the "psycho-instructional dimension" of bilingual education is concerned with the unique cultural and social class values that predict the instrucational strategies which will be most effective in helping bilingual/bicultural children.

THE STUDY

Purpose of the Study

The two strategies were compared in their effectiveness to enable undergraduate bilingual teacher education students to demonstrate proficiency in the planning of lessons, specifically:

a) The ability to state behavioral objectives and write learning activities related to the behavioral objectives;

b) The ability to plan a lesson in different content areas" math and science in Spanish and social studies and literature in English;

c) The ability to include Puerto Rican culture in the lesson plans;

d) The ability to make provisions for field-sensitive and field-independent activities in plans developed.

The Subjects

The forty participants in the study were undergraduate, Spanish-English, Puerto Rican, bilingual/bicultural teacher trainees. They attended a public, four-year college in New York City and were within two years of receiving New York State provisional certification as elementary school teachers.

Training and Implementation of Program

The present study was initiated by first randomly assigning intact classes to two treatment groups (cooperative and self-instructional). After screening all participants for selected criteria and language proficiency in Spanish and English, the lesson plans of 40 trainees were selected for data analysis. Since no significant differences were found between treatment groups in language proficiency in English and Spanish and on the Lesson-Competency-Planning pretest, only posttest scores were analyzed.

During the training sessions, each session was team taught, with trainers rotating sequence of presentation and language. In total, there were six training sessions consisting of eighteen hours of training, in addition to the pretest and posttest. Both treatment groups viewed video presentations of the model training materials. The self-instructional treatment group used a self-teaching package. The cooperative treatment group was presented with the same training material through the use of scripts and materials that encouraged teacher/student interaction.

After the posttest was administered, the second plan in Spanish and the second plan in English for each participant was sent to one of four outside lesson plan raters. The raters used a researcher-developed, validated, evaluative checklist to do a content analysis of the four selected areas within the plans: behavioral objectives, field-sensitive, field-independent elements, incorporation of Puerto Rican and bicultural elements, and instructional strategies. Raters indicated a total number and rating for each plan and each of the four areas analyzed. Statistical analyses were made of the data, using two-tailed t tests to analyze differences between the independent means for each treatment group.

SUMMARY AND CONCLUSIONS

In comparing the cooperative (field-sensitive based) treatment group with the self-instructional (field-independent based) treatment group, it was noted that the cooperative group scored significantly higher at the .05 level on its ability to write behavioral objectives, to include Puerto Rican cultural elements in English, and to plan for a variety of instructional strategies, to include more field-sensitive elements, to earn higher total scores on the plans developed and to score higher on the posttest.

These findings suggest that the incentive-motivational and human-relational characteristics such as those outlined by Ramirez and Castaneda (1974), Buriel (1975) and Vazquez (1979), might have enabled the cooperative treatment group to score significantly higher at the .05 level on most of the selected skills. Such factors as student to

student interaction, teacher warmth, and personalized rewards, informal discussions that provided guidance and, at the same time, enable the trainees to relate and write about their own experiences for each of the stories in the content areas, may have contributed to the differences indicated.

An analysis was made of the mean scores each treatment group received on the plans written in English and Spanish and on the posttest in English and Spanish.

In English, the cooperative treatment group had significantly higher group mean scores on behavioral objectives, cultural elements, instructional strategies, field-sensitive elements, total scores earned on the lesson plans and on the posttest than did the self-instructional treatment group. The self-instructional group had a slightly higher mean score (not significant) for field-independent elements in English.

In Spanish, the cooperative treatment group scored significantly higher than did the self-instructional group on mean scores for behavioral objectives, instructional strategies, field-sensitive elements, total scores earned for lesson plans and on the posttest.

Both treatment groups had significantly higher mean scores for field-sensitive elements in Spanish as compared to field-sensitive elements in English across treatments. No significant differences were found for mean scores of field-independent elements in Spanish or English across treatments.

These findings provide additional data on the learning styles of adult, Spanish-English bilingual teacher trainees and tend to support

the theories of Ramirez and Castaneda (1974) indicated, the cooperative environment provided group feeling and emotional support. The researchers recommended teaching field-sensitive type children through the use of humanized story content. The findings seem to be applicable to adult learners, who seemed to enjoy creating stories and activities that were field-sensitive in nature. They often included themselves, family, and community in the stories they prepared with the lesson plans.

IMPLICATIONS FOR BILINGUAL-BICULTURAL TEACHER TRAINING

As Blanco (1978) indicated, there is a void of empirical data in the field of bilingual-bicultural teacher training. This study extends the teacher training project of Ramirez and Castaneda (1974), in which teachers were trained to identify field-sensitive/field-independent teaching-learning styles and then were trained to develop a bicognitive focus in the classroom by providing a balance of the two teaching strategies.

As observed during the actual training sessions, the cooperative treatment group participants liked the teacher-training materials and activities that presented humanized situations and stories and that helped the trainees to acquire specific competencies, while, at the same time, enabled them to relate their own experiences to the training materials. Both groups used the training materials to include humanized situations. The practice of creating their own stories and including familiar places from the bilingual-bicultural communities seemed to be a useful experience for both groups.

As noted, the self-instructi onal group had lower scores as well as demonstrated reactions of frustration. It is suggested that specific training be given before Hispanic trainees are required to follow self-instructional training modules, since this population seems to function better in a cooperative, interpersonal atmosphere between teacher and students and student to student.

A bicognitive learning environment could be created if gradual exercises, that use a programmed approach, were presented during training, while the trainees also had additional cooperative group experiences.

As final suggestion for bilingual/multicultural teacher training is the need for staff development at the university level. Both monolingual and bilingual teacher education faculty need to develop a greater awareness of teaching-learning styles across cultures, and to enable teacher trainers to develop teaching style flexibility within themselves and their trainees.

As Cohen (1969), Ochoa and Rodriguez (1978) and Halverson (1979) have indicated, U. S. schools have tended to use mostly field-independent teaching strategies to meet the needs of middle-class youngsters. If teachers are to begin developing teaching-learning style flexibility, the training must begin at the university and through inservice trainingv

The present investigation pointed out the advantage for bilingual teacher trainees to have competency-based training experiences in both languages (English and Spanish) to provide bilingual/bicultural objective measures and to practice the use of different teaching strategies.